

I claim:

1. An arrangement for generating and storing metering information in a meter for measuring a consumed commodity, the arrangement including:

- a) a processing circuit operable to receive commodity consumption information and generate metering information therefrom;
- b) a non-volatile, rewriteable random access memory for storing the metering information during normal operation, the non-volatile, rewritable random access memory operable to retain the stored metering information in the absence of external electrical power.

2. The arrangement of claim 1 wherein the meter comprises an electricity meter and wherein:

the processing circuit is operable to generate load profiling information, said load profiling information including energy usage information for a plurality of time periods; and

wherein the non-volatile rewriteable random access memory is further operable to store the load profiling information.

3. The arrangement of claim 1 wherein the meter comprises an electricity meter and wherein:

the processing circuit is operable to generate metering information using one of a plurality of sets of meter formulae;

the non-volatile rewriteable random access memory is further operable to store the one of the plurality of sets of meter formulae.

4. The arrangement of claim 3 further comprising an external communication port and wherein the one of the plurality of sets of meter formulae stored in the non-volatile rewriteable random access memory may be replaced with a different one of the plurality of sets of meter formulae via communication with an external device through the external communication port.

5. The arrangement of claim 1 wherein the meter comprises an electricity meter and wherein:

the processing circuit is operable to generate metering information using a first set of calibration information; and

the non-volatile rewriteable random access memory is further operable to store the first set of calibration information.

6. The arrangement of claim 5 further comprising an external communication port and wherein the first set of calibration information may be replaced with a second set of calibration information via communication with an external device through the external communication port.

7. The arrangement of claim 1 wherein the non-volatile rewriteable random access memory is a ferromagnetic RAM.

8. The arrangement of claim 1 wherein the non-volatile rewriteable random access memory further stores at least one interim metering variable generated by the processing circuit and subsequently retrieved by the processing circuit for calculation of a metering value.

9. The arrangement of claim 1 wherein the non-volatile rewriteable random access memory further stores program code executed by the processing circuit.

10. The arrangement of claim 1 wherein:

the processing circuit is operable to generate statistical commodity consumption information, said statistical commodity consumption information including commodity usage information for a plurality of time periods; and

wherein the non-volatile rewriteable random access memory is further operable to store the statistical commodity consumption information.

11. The arrangement of claim 1 wherein the processing circuit includes plural

processing devices, said plural processing devices including a digital signal processor.

12. A method of storing metering information in an utility meter comprising:

- a) employing a processing circuit to generate metering information relating to the consumption of a metered commodity;
- b) periodically storing the generated metering information in a non-volatile rewriteable random access memory;
- c) retaining the stored metering information in the non-volatile rewriteable random access memory during the interruption of power to the non-volatile rewriteable random access memory.

13. The method of claim 12 wherein step b) further comprises storing the generated metering information in a non-volatile rewriteable random access memory at each of the regular time intervals.

14. The method of claim 12 wherein:

step a) further comprises employing the processing circuit to generate load profiling information, said load profiling information including energy usage information for a plurality of time periods;

step b) further comprises periodically storing the generated load profiling information in the non-volatile rewriteable random access memory; and

step c) further comprises retaining the stored load profiling information in the non-volatile rewriteable random access memory during the interruption of power to the non-volatile rewriteable random access memory.

15. The method of claim 14 wherein:

step a) further comprises employing the processing circuit to generate metering information using one of a plurality of sets of meter formulae;

step b) further comprises storing the one of the plurality of sets of meter formulae.

16. The method of claim 15 further comprising a step of replacing the one of the plurality of sets of meter formulae stored in the non-volatile rewriteable random access memory with a different one of the plurality of sets of meter formulae via communication with an external device.

17. The method of claim 14 wherein:

step a) further comprises employing the processing circuit to generate metering information using a first set of calibration information;

step b) further comprises storing the first set of calibration information; and
step c) further comprises retaining the first set of calibration information in the
non-volatile rewriteable random access memory during the interruption of power to the
non-volatile rewriteable random access memory.

18. The method of claim 17 further comprising a step of replacing the first set of calibration information stored in the non-volatile rewriteable random access memory with a second set of calibration information via communication with an external device.

19. The method of claim 14 further comprising storing at least some program code executed by the processing in the non-volatile rewriteable random access memory.

20. An arrangement for generating and storing metering information in an electricity meter for measuring consumed energy, the arrangement including:

- a) a processing circuit operable to receive energy consumption information and generate metering information therefrom, said metering information including load profiling information;
- b) a non-volatile, rewriteable random access memory for storing the metering information during normal operation, the non-volatile, rewritable random access memory operable to retain the stored metering information in the absence of external electrical power, said non-volatile, rewriteable random access memory further storing at least some program code executed by the processing circuit.

21. An arrangement for generating and storing metering information in an electricity meter for measuring consumed energy, the arrangement including:

- a) a processing circuit operable to receive energy consumption information and generate metering information using the received energy consumption information, a first set of calibration information;
- b) a non-volatile, rewriteable random access memory for storing the first set of calibration information and for storing the metering information during normal operation, the non-volatile, rewritable random access memory operable to retain the calibration information and the stored metering information in the absence of external electrical power.